REMARKS

Favorable consideration of this application is respectfully requested in view of the above amendments and following remarks. Claim 2 is editorially amended. Claims 31 and 32 are added and supported in Applicant's original disclosure. Claims 1, 2, 12-16, 21, and 23-26 were examined and claims 27-30 are considered withdrawn. Claims 1, 2, 12-16, 21, and 23-30 are pending.

Claims 1, 2, and 12 were rejected under 35 U.S.C. 102(b) as being anticipated by Wahlsten et al. Applicant respectfully traverses this rejection to the extent it is maintained.

The rejection states that Wahlsten et al. shows that interaction of TSST1 with MHCII molecules did stimulate an anti-cancer immune response, while relying on page 6765. In the rejection, it is further contended that if the interaction of TSST1 with MHCII molecules on normal cells induced an immune response, the control animals in the in vivo studies would have responded to the construct and, further, that the proto-oncogene erb-B-2 would only be present on cancer cells and the claims recite a ligand that stimulates cancer cell growth or is overexpressed by cancer cells. Since erb-B2 was expressed in cancer cells, the reference meets the claimed limitations. Applicant respectfully disagrees and contends that Wahlsten et al. does not satisfy the claimed features for at least the following reasons.

Applicant's claimed invention, for example, recites ligands including EGF family or VEGF family and recites a superantigen including Staphylococcal enterotoxin such as SEA. EGF family and VEGF family, for example, share very similar functions and effects. Applicant respectfully submits that his invention resides in the general combination of a ligand and a superantigen as recited in claim 1 and such specific combinations further illustrate the claimed features.

In further support of the previous arguments against the application of Wahlsten et al., Applicant respectfully submits that Wahlsten et al. does not suggest any other combination except TM-TSST1. Furthermore, according to the assay method, the method in Wahlsten et al. is extremely specific, and unsuitable for practice use, rendering application of the reference questionable. In fact, the TSST1-TM protein is first coated on cancer cells P815 (right column, pp.6764), and then injected into mice. Therefore, if

the fusion protein is injected into the mice alone, one of skill in the art would doubt whether the fusion protein would have an effect or not. Furthermore, the introduction of cancer cells is very dangerous, and itself may induce an immune response and infection. Whether the fusion protein in Wahlsten et al. can automatically target to cancer cells is still in doubt, under the teaching of Wahlsten et al. The induction of the anti-tumor immune response seems to attribute to the coated cancer-cells. However, such a treatment method by Wahlsten et al. would be unpractical for clinical use. Therefore, when reading Wahlsten et al., one of skill in the art would doubt whether the fusion protein of superantigen with a peptide directly interacts with cancer cell surface can be practically used in clinical therapy, and therefore the reference does not disclose or suggest a fusion protein that can lead to anti-cancer response, where the administration thereof realizes good anti-cancer effects. Applicant submits that claim 1 distinguishable from Wahlsten et al. for at least the foregoing reasons.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1, 2, 12-16, 21 and 23-26 are rejected under 35 U.S.C. 103(a) as being obvious over Wahlsten et al. (above) in view of Chandler et al. Applicant respectfully traverses this rejection to the extent it is maintained.

The deficiencies of Wahlsten et al. have been explained in detail above with respect to claims 1, 2, and 12. Applicant respectfully submits that Chandler et al. does not further a rejection of these claims, and that claim 1 and its dependent claims 2 and 12-16 are patentable for at least the reasons already discussed.

Regarding claims 21-26, remaining claims 21 and 23-26 are allowable for at least the following reasons. Wahlsten et al. is deficient for at least the reasons already mentioned. The rejection further states that Wahlsten et al. does not teach a member of the epidermal growth factor family fused to the superantigen SEA. Chandler et al. does not further a rejection of claims 21 and 23-26. Chandler et al. merely describes a fusion protein that may include a heparin-binding epidermal growth factor (HB-EGF). However, there is motivation or reasonable suggestion in the references to combine a superantigen with the claimed ligands so as to arrive at the fusion protein claimed. For at least the foregoing reasons, there is no reasonable suggestion that these references would

be combined in the manner alleged by the Examiner. Applicant respectfully submits that remaining claims 1, 2, 12-16, 21, and 23-26 are allowable.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Regarding added claims 31 and 32, EGF and VEGF are demonstrated by Applicant as substantially over-expressed in the cancer cells. Such particular ligands EGF and VEGF as claimed in claims 31 and 32 in combination with a superantigen are not mentioned in the prior art documents, nor are they obvious. For at least these reasons, claims 31 and 32 are separately patentable.

With regard to added claims 27-30, Applicants respectfully request that these claims be reinstated at least because they include the limitations of claim 21.

In view of the above amendments and remarks, Applicant believes that the pending claims are in a condition for allowance. Applicant respectfully requests favorable consideration of the claims in the form of a Notice of Allowance. If any questions arise regarding this communication, the Examiner is invited to contact Applicant's representative listed below.

Respectfully submitted,

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